BUILD A 2 METER 440 DUALBAND SLEEVED VERTICAL DIPOLE!

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2 METER/440 DUAL BAND SLEEVED DIPOLE MODIFICATION

BY
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The photo above is of my balun modification of the QST August, 2006 page 50, 2 Meter/440 dual bander sleeved dipole by Geoff Haines, N1GY. He is credited with original article in QST magazine.
The original sleeved dipole project idea is from Harold Melton KV5R.
N1GY Improved upon his design.
I took it one step further by changing the location of the balun.

The only Mod I made to it other than personal choices of similar materials was the placement of the Balun as shown in the picture above. Otherwise it is essentially the same as the original design.

I modified it to place the balun around the PVC at the base just below the lower element. In the original QST article design by NIGY, the balun was about 12 inches below the bottom of the PVC. By placing the balun ON the PVC as in the picture, this has significantly improved it's function and apparently lowered the take-off angle. I can now hit repeaters behind hills 70 miles away.
Before the mod, I could not hit a repeater 40 miles away in the open on top of a tall hill. I believe this was due to the steep take off angle previously of the original article design.

My alteration to QST's sleeved dipole, I believe, prevents the extra coax from attempting to be part of the lower element and resonating, throwing off your SWR on 440 and raising the antenna pattern. The balun works double duty here.

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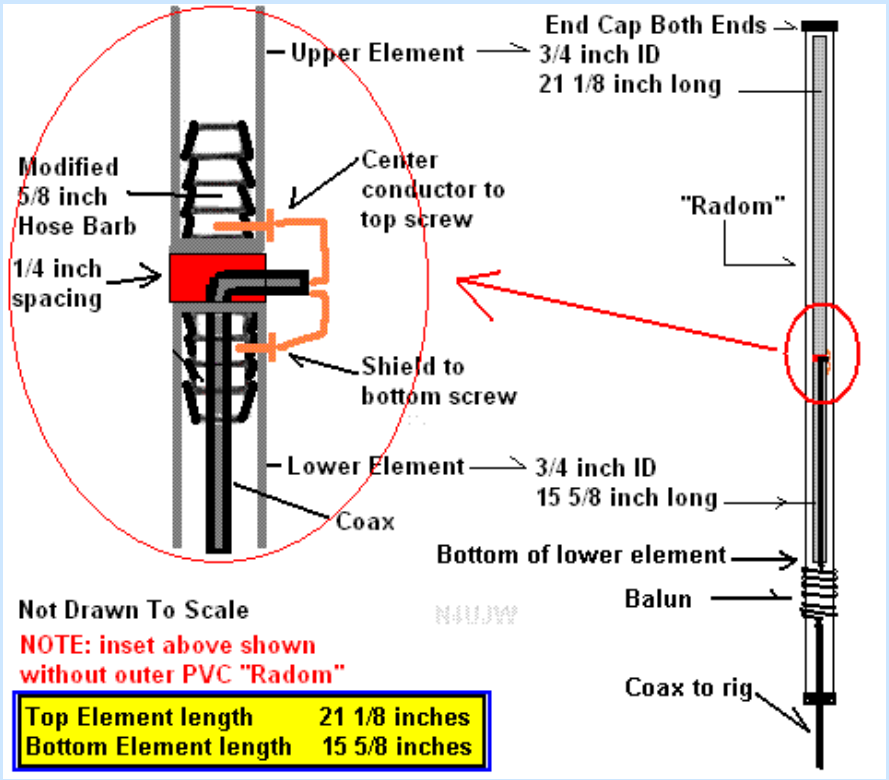
I can tell my signal has a much lower Take-Off angle now than before because I can hit repeaters consistently further away than I could before this alteration. I had very strong signals close by with both designs, however, with the new placement of the balun, the distant repeaters are now much clearer.

In fact, one repeater that I talked on repeatedly with my W7LPN Vertical Copper Tubing & PVC Dipole, seen in another project, was unreachable with N1GY's design. After my mod, I can reach it full quieting at over 80 miles thru uneven terrain.

The basic design is from August, 2006 QST magazine., but I wrapped the balun around the PVC just below the lower element, NOT underneath the antenna on the mast.

That's too far and the tail of the coax will radiate, messing up the pattern and swr on 440.

Here is a simple drawing of the construction of the 2 Meter/440 Sleeve Dipole as modified by W7LPN ~~~ Notice the balun is very close to the bottom element, not down on the mast!



ERROR NOTED IN THE ORIGINAL N1GY QST ARTICLE!
Upper element length is shown at two different lengths in Figures in article!
Figures 2 and 3 show 22 1/8 inches
Figure 4 states 21 1/8 inches as does the drawing above (taken from figure 4)
It is suggested that you use 22 1/8 inches and trim if needed

Here are some added tips!
I had an idea for the sleeved dipole for a cleaner looking finished project., and no visible coax wrapped or electrical tape.....
Put ferrite cores inside a short, larger diameter piece of PVC just below the lower element and then neck it back down to keep them in place and allow

space for a mounting stub below it.

Or, coil your balun up inside the bottom of the PVC "Radom" next to the lower element and secure it from uncoiling! Use the same length as 5 or 6 coils in 5 inch diameter loops.

Build one yourself for more 2 / 440 fun!.....73 W7LPN....Rick Frazier

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